A letter from the International Black-capped Petrel Conservation Group concerning recent developments in the commercial leasing for wind power development on the Central Atlantic Outer Continental Shelf

16 December 2022

Attn:
Ms. Bridgette Duplantis
Bureau of Ocean Energy Management
Office of Leasing and Plans
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123

Dear Ms. Duplantis,

Thank you for the opportunity to provide additional comment on the commercial leasing process for wind power development on the Central Atlantic Outer Continental Shelf.

The International Black-capped Petrel Conservation Group is a collaborative association of organizations and individuals with a shared interest in the conservation of the Black-capped Petrel across its range. In order to secure the long-term viability of the species, we are committed to engage with diverse stakeholders; to find, conserve, and restore breeding populations in the species' range by addressing key threats on land and at sea; to support the co-existence of Black-capped Petrels and people in surrounding communities; and to use the best science and methods available to advance adaptive, participative, and equitable results-based management.

We gladly acknowledge that the Black-capped Petrel was given high consideration in the process to revise the siting of wind energy areas proposed in April 2022. The Black-capped Petrel is considered Endangered throughout its range (BirdLife International 2018) and is being considered by the U.S. Fish and Wildlife Service for listing as Threatened under the Endangered Species Act (U.S. Fish and Wildlife Service 2018). However, to help BOEM further integrate this globally endangered species in its process, we (1) share our specific concerns about the recently revised proposal for Central Atlantic Outer Continental Shelf (CAOCS) call areas, and (2) provide recommendations for mitigating impacts of offshore wind energy on the Black-capped Petrel in the future.

1. Concerns about the revised proposal for Central Atlantic Outer Continental Shelf call areas

BOEM supported its revision of the CAOCS call areas with an Ocean Planning Model reported in Randall et al. (2022b). We commend the authors for the amount of work and thought that went into this report. However, aspects of the methodology remain unclear. For example, without written justification, it is difficult to understand why no other seabird species or assemblage was considered besides Black-capped Petrel. Moreover, although several geospatial datasets were available for the Black-capped Petrel (Table 1), the authors used only a single dataset. They also did not provide justifications about how datasets were selected for inclusion in the Ocean Planning Model.

At least seven geospatial datasets on Black-capped Petrel are available for the CAOCS, pertaining to at-sea observation records, individual-based tracking, and habitat modeling based on at-sea observation records (Table 1). Used individually, these datasets can have a variety of shortcomings. For example, at-sea surveys show bias associated with geographic area, season, time of day, or weather and sea state. On the other hand, individual-based tracking of rare or vulnerable species is restricted by small sample sizes and representativity of tracked individuals. Therefore, using geospatial datasets in conjunction can greatly improve the predicting capability of species distribution models, such as the ones used in Randall et al. (2022b) (Yamamoto et al. 2015, Croll et al. 2022, Fischer et al. 2022). Using distribution models for assemblage of seabird species can also be used as a proxy when data are lacking (Deakin et al. 2022, Randall et al. 2022a). Consequently, **we suggest that, as much as possible, BOEM uses all available data streams to assess the distribution of the Black-capped Petrel in relation to proposed wind energy areas. At a minimum, we suggest that BOEM justifies any prioritization in its use of datasets in the Ocean Planning Model.**

Additionally, species distribution models based on habitat modeling are constrained by the temporality of the habitat covariates used. For example, the MDAT dataset used for Black-capped Petrel in Randall et al. (2022b) was constrained to represent past environmental conditions across the range of years of sighting data, ie. 1978-2016 (Winship et al. 2018). However, wind energy production in the CAOCS will not start until several years in the future and continue for several decades before decommission. With global changes forecasted to affect ocean ecosystems, **we also suggest that BOEM utilizes predictive species distribution models based on forecasted environmental conditions to inform its siting process for the Black-capped Petrel** (and other vulnerable marine species).

2. Recommendations for a mitigation of risks impacting the Black-capped Petrel

The Black-capped Petrel is one of only a few species of seabirds to be present in the CAOCS for most of the year, and the only endangered seabird species to do so (Robinson Willmott et al. 2013). Thus, should proposed lease areas retain their current shape, the risk for the Black-capped Petrel population to be harmed by wind energy development in the CAOCS will remain high. The Black-capped Petrel, like other *Pterodroma* species, relies on adult individuals to maintain a viable population. Therefore, any loss of individuals would critically compromise the health of the population and have long-lasting effects on the demographic recovery of the species (Wheeler et al. 2021). Before any development occurs in the proposed CAOCS areas, we recommend that BOEM applies consistent mitigation for the Black-capped Petrel.

2.1. Measuring exposure and impact

Despite recent tracking and survey efforts, several important information gaps remain to be filled to accurately inform the mitigation process. In particular, following years of decline since the last population estimate by Simons et al. (2013), calculations of population estimates need to be updated to reflect current numbers. Together with this **estimate of the global population**, an estimate of the **size of the population using the CAOCS** and a measure of the **seasonality of presence in the CAOCS** are needed to accurately calculate risk exposure in the proposed wind energy areas. In addition, a **measure of connectivity between wind areas in the CAOCS and breeding locations in the Caribbean** is necessary to inform accurate population viability models, and to prioritize compensatory conservation actions at breeding sites.

At the microscale, more data are needed on the **flight heights of Black-capped Petrel** and other bird species using the CAOCS (with a particular emphasis on possible changes in flight height due to changes in weather conditions) to inform accurate collision risk models.

2.2. Avoiding and minimizing impacts

At the macroscale, despite significant revision, the revised CAOCS call areas still encroach into Black-capped Petrel core use areas (Figure 1). Publicly available datasets of observation records show overlap between revised call areas D-1, E-1, E-2, and F-2 and Black-capped Petrels: Sussman and U.S. Geological Survey (2014), and eBird (2022) (Figure 2). More specifically, call area E-1 overlaps with tracking locations of four individual petrels tracked by satellite in Satgé et al. (2022), call area E-2 with three individuals, and call area F-2 with one individual. In total, revised CAOCS call areas overlapped with the locations of 5 petrels. Area E-2 overlapped with the locations of one petrel tracked by satellite in Jodice et al. (2015). Overall, proposed call areas overlapped with tracking locations of six of the 13 petrels tracked by satellite in Jodice et al. (2015) and Satgé et al. (2022). This sample size may appear limited but it is very likely to be representative of the overall patterns of marine use by Black-capped Petrels in the region. Given that individual petrels were selected opportunistically for tracking, the probability to track this proportion of individuals to those specific areas in the CAOCS can only be as high if a large proportion of the population is indeed using these areas. Therefore, **we recommend that BOEM revises the shape of areas E-1 and E-2 to better preserve important Black-capped Petrel habitat in the CAOCS. Although we recognize that the following may not be possible, we actually suggest removing areas E-1 and E-2 altogether.**

2.3. Compensating for impacts

If displacement and/or mortality is observed or suspected, BOEM should pursue means of compensation for these adverse effects. An appropriate mechanism should be developed through which population damages are translated to funding from responsible parties for proactive support of Black-capped Petrel conservation strategies (e.g., National Resource Damage Assessment). Wheeler et al. (2021) provide several strategies to enable conservation activity and address threats and which could be pursued to offset damages.

Conservation strategies that directly address land-based threats to Black-capped Petrels include **Reduce Predator Pressure**; **Reduce Collisions and Groundings, Support Community Development In Boukan Chat, Haiti**; **Undertake Study of Socio-Economic Drivers of Threats at La Visite, Haiti** and **Engage Dominican Government to Plan and Strengthen Oversight of Parks** (the latter three strategies addressing site-specific threats of habitat loss and degradation and fire mortality). Other strategies develop enabling conditions: **Build Local Capacity** for conservation work, **Locate and Characterize Nest Sites** to inform conservation opportunities and **Explore Restoration Methods** to bolster breeding populations through interventions.

All of these strategies are now in place under national and international leadership, but need ongoing financial support to achieve their objectives.

3. Conclusion

We hope that, by highlighting the Black-capped Petrel as the only seabird species of interest for the planning process, BOEM recognizes the important research and conservation needs to adequately study and conserve this declining species. To date, conservation of the Black-capped Petrel has relied on modest, short-term funding for baseline activities such as nest searching, monitoring, and minimal predator control at nesting sites, with occasional opportunistic funding for research. Certainly, Black-capped Petrel research and conservation have not received the funding commensurate with the importance given by BOEM to the species in the CAOCS wind energy planning process.

Moreover, as the only seabird considered in the revision of the call areas, the Black-capped Petrel becomes in essence an umbrella species for other seabirds impacted by offshore wind energy in the CAOCS. For this reason also, we respectfully urge BOEM to increase its involvement in monitoring, research, and conservation for this globally endangered species.

We remain at your disposal to answer questions or provide additional information on the Black-capped Petrel.

Sincerely,

- Jennifer Wheeler, Chair
- Yvan Satgé, Member

On behalf of the members of the **International Black-capped Petrel Conservation Group**,
BirdsCaribbean, Natick, MA, USA

These comments were prepared by Yvan Satgé, Research Associate, Clemson University, Clemson, SC 29634, USA. For questions or remarks about this letter, please contact Mr. Satgé at ysatge@clemson.edu.

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Table 1. Existing geospatial datasets on Black-capped Petrel distribution and marine use in the Central Atlantic Outer Continental Shelf.

Type	Data layer	Reference	Source/link
At-sea observation records	Atlantic Offshore Seabird Dataset Catalog: Black-capped Petrel	Sussman, A. & U.S. Geological Survey (2014). Atlantic Offshore Seabird Dataset Catalog, Atlantic Coast and Outer Continental Shelf, from 1938-01-01 to 2013-12-31 (NCEI Accession 0115356). NOAA National Centers for Environmental Information. Dataset.	https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.nodc:0115356
At-sea observation records	Atlantic Marine Assessment Program for Protected Species (AMAPPS II): Black-capped Petrel	Palka D, Aichinger Dias L, Broughton E, Chavez-Rosales S, Cholewiak D. et al. (2021). Atlantic Marine Assessment Program for Protected Species: FY15 – FY19. Washington DC: US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2021-051. 330 p.	https://marinecadastre.gov/espis/#!/search/study/100066
At-sea observation records	eBird: Black-capped Petrel	eBird (2022). eBird: An online database of bird distribution and abundance. eBird, Cornell Lab of Ornithology, Ithaca, New York.	http://www.ebird.org
Digital aerial survey records	NYSERDA Digital aerial baseline survey: Black-capped Petrel	New York State Energy Research and Development Authority (NYSERDA). 2021. "Digital Aerial Baseline Survey of Marine Wildlife in Support of Offshore Wind Energy: Spatial and Temporal Marine Wildlife Distributions in the New York Offshore Planning Area, Summer 2016–Spring 2019," NYSERDA Report Number 21-07a. Prepared by Normandeau Associates, Inc., Gainesville, FL, and APEM, Ltd., Stockport, UK.	https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Research/Environmental/21-07b-Digital-Aerial-Baseline-Survey-Volume-2-Results-Birds.pdf
Individual-based tracking	Black-capped Petrel, 2014-2015 PTT tracking data	Jodice, P. G., Ronconi, R.A., Rupp, E., Wallace, G.E., & Satgé, Y. (2015). First satellite tracks of the endangered black-capped petrel. Endangered Species Research, 29(1), 23-33.	https://www.northeastoceandata.org/6O69FtEY
Individual-based tracking	Black-capped Petrel, 2019 PTT tracking data *	Satgé, Y.G, Keitt, B.S., Gaskin, C.P., Patteson, J.B., & Jodice, P.G.R. (2022). Temporal and spatial segregations between phenotypes of the Diablotin Black-capped Petrel Pterodroma hasitata during the breeding and non-breeding periods. bioRxiv 2022.06.02.491532; https://doi.org/10.1101/2022.06.02.491532.	Upon request to the authors.
Habitat modeling	Black-capped petrel annual relative density **	Winship, A.J., B.P. Kinlan, T.P. White, J.B. Leirness, & J. Christensen (2018). Modeling At-Sea Density of Marine Birds to Support Atlantic Marine Renewable Energy Planning: Final Report. OCS Study BOEM 2018-010. Sterling, VA. 67 pp.	https://coastalscience.noaa.gov/data_reports/modeling-at-sea-density-of-marine-birds-to-support-atlantic-marine-renewable-energy-planning-final-report/

* Provided to BOEM by the lead author of the study.

** Used in Randall et al. (2022).

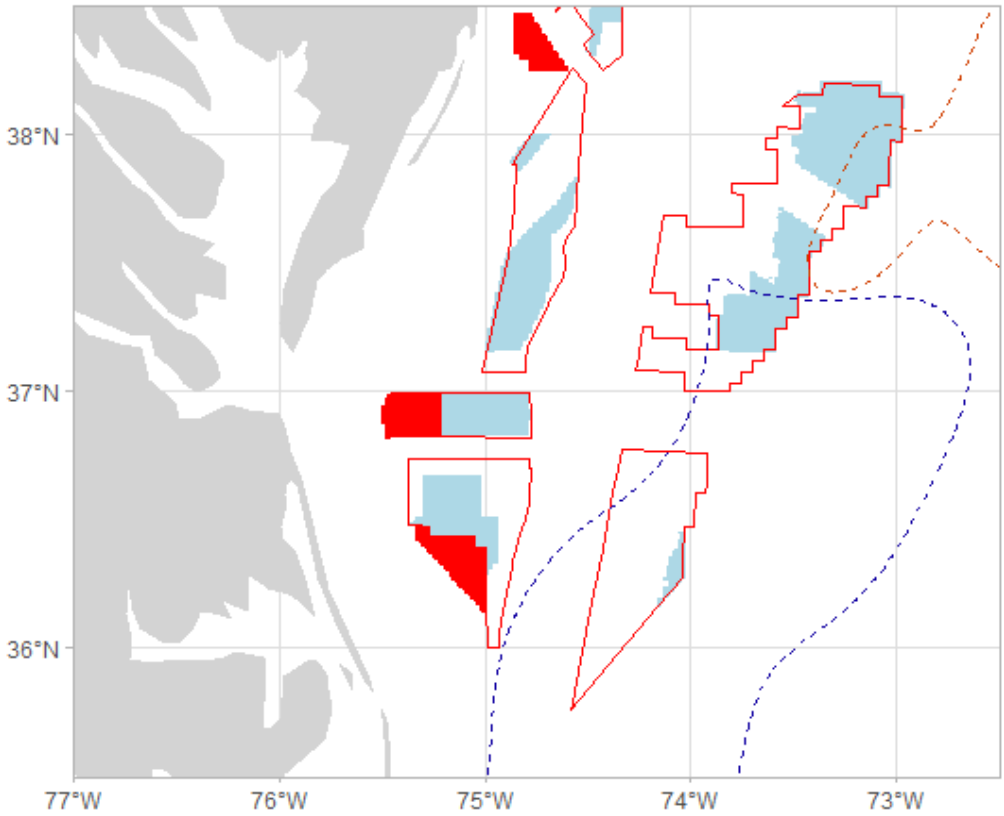

Figure 1. Overlap between Central Atlantic offshore wind areas and core use areas of Black-capped Petrels tracked by satellite, May 2019 – August 2019 (adapted from Satgé et al. 2022). Dashed lines indicate the core areas of dark-form (blue) and light-form petrels (yellow). Red-filled polygons indicate the location of active leases. Red-outlined polygons indicate lease areas on the Central Atlantic Outer Continental Shelf proposed in April 2022, and blue-filled polygons indicate revised lease areas proposed in November 2022. These maps are spatial representations of tracking records with inherent limitations: we refer to the original reference for a discussion of these limitations.

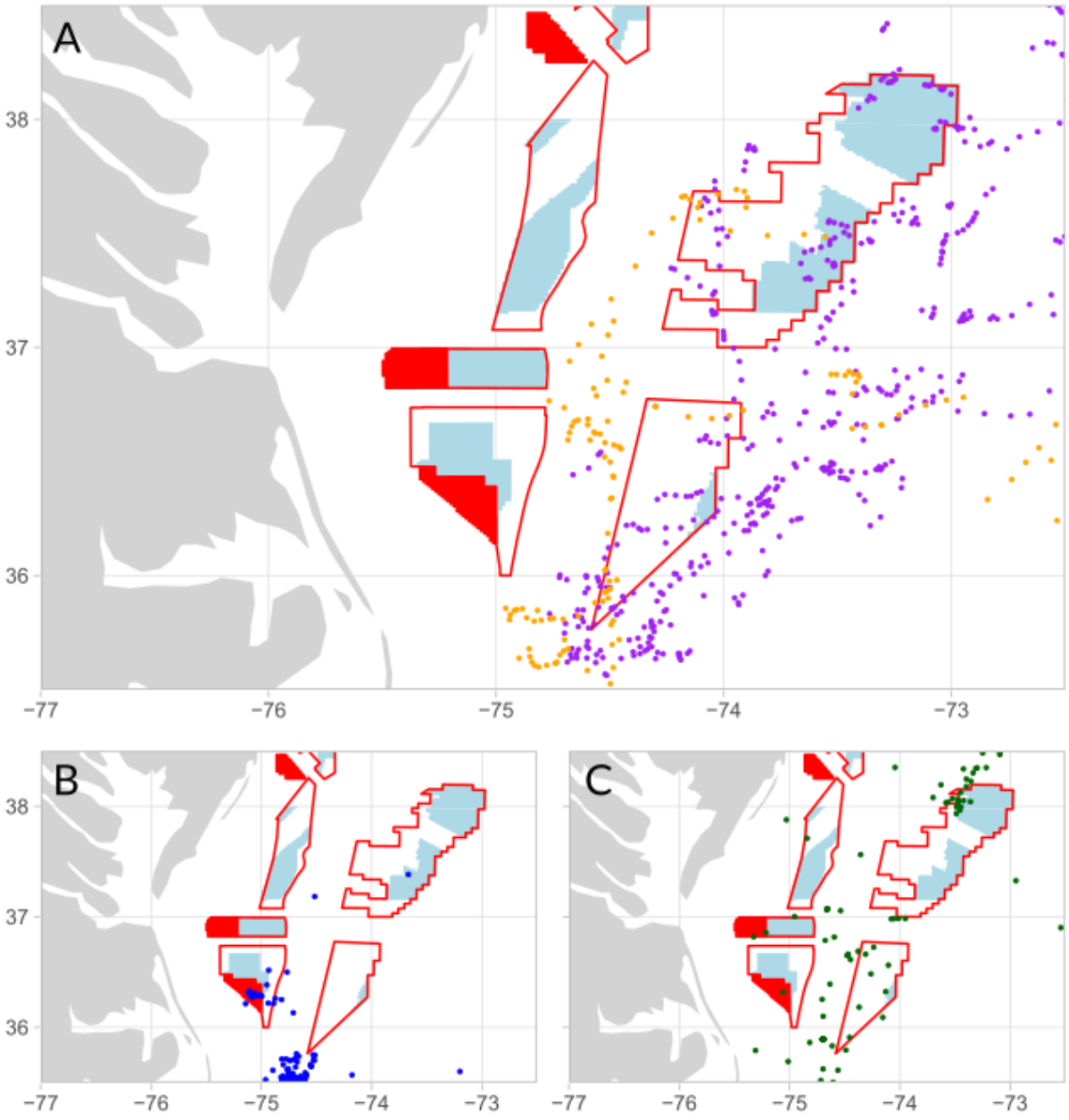

Figure 2. Overlap between Central Atlantic offshore wind areas and Black-capped Petrel records. A) Locations of individual-based satellite tracking: orange: Jodice et al. (2015); purple: Satgé et al. (2022). B) Observation records in Sussman and U.S. Geological Survey (2014). C) Observation records in eBird (2022). Red-filled polygons indicate the location of active leases. Red-outlined polygons indicate lease areas on the Central Atlantic Outer Continental Shelf proposed in April 2022, and blue-filled polygons indicate revised lease areas proposed in November 2022. These maps are spatial representations of tracking and observation records with inherent limitations: we refer to the original references for discussions of these limitations.